Date of Task Order: 2-6-18
Task Order Number: Task Order no. 3.0

TASK ORDER BETWEEN THE DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION AND THE CONFEDERATED SALISH AND KOOTENAI TRIBES OF THE FLATHEAD INDIAN RESERVATION

WHEREAS the State of Montana and the Confederated Salish and Kootenai Tribes (CSKT) entered into a water compact that was codified in Montana Code Annotated § 85-20-1901.

WHEREAS the State of Montana, by and through the Montana Department of Natural Resources and Conservation (DNRC), and the CSKT have entered into a Master Agreement for purposes of carrying forward the implementation of the Water Compact under Article IV.G and Appendices 3.4 and 3.5 of the Compact. Under the Master Agreement, the Parties will receive recommendations through the Compact Implementation Technical Team (CITT) related to implementation expenditures.

WHEREAS the CITT approved a 10-year Workplan for Water Measurement at Instream Flow, River Diversion Allowance, and Natural Flow and Irrigation Return Flow Locations (Workplan), on May 24, 2016 of which this Task Order implements; the Scope of Work for this Task Order 3.0 is attached.

The purpose of this Task Order is to provide funding in 2018 to contract services for the generation of engineering designs for twelve structures that are a component of the Workplan. The parties, upon execution of this Task Order, shall authorize a not-to-exceed amount of $200,000 to complete the Scope of Work. Following authorization from the parties, the CSKT will solicit bids from qualified respondents to contract for services. The fund distribution under this Task Order shall match the budget submitted by the CSKT selected bid respondent, in an amount not to exceed $200,000. The final fund transmittal amount shall be declared in letter format from the CSKT CITT representative to the DNRC CITT representative and include an attached copy of the respondent bid.

For this Task Order, the primary contact person for the DNRC will be the State's CITT representative. The primary contact person for the CSKT will be the Tribes' CITT representative.

Except as modified by this task order, all terms and conditions of the Master Agreement original contract remain unchanged and in full force and in effect.

The parties through their authorized agents have executed this Task Order on the dates set out below.

STATE OF MONTANA

By: _____ Date: Jan. 25, 2018

CONFEDERATED SALISH AND KOOTENAI TRIBES

By: _____ Date: 2-6-18

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Scope of Work: Contract Design of Ratable Hydraulic Structures for Canal Water Measurement on the Flathead Indian Irrigation Project

Task Order no. 3.0 (CSKT FY18: October 1, 2017-September 30, 2018)

Introduction

The purpose of Task Order 3.0 is to provide funding to the Confederated Salish and Kootenai Tribes (CSKT) in 2018 to contract engineering services to design twelve ratable hydraulic structures for canal water measurement on the Flathead Indian Irrigation Project (FIIP).

Background

The Scope of Work for Task Order 3.0 is based on the CITT 10-year Water Measurement Workplan (Workplan) approved by the CITT in May of 2016. The Workplan had three focus areas: a) support for additional staff to assist with CITT activities; b) installation or upgrade to stream and canal gages identified as administrative points in the Compact; and c) planning for and installation of ratable hydraulic structures in canals to improve measurement accuracy and reduce long-term measurement labor costs. The Workplan is scheduled over a ten-year period and is intended to be implemented and funded following the task order process set forth in a Master Agreement between the Confederated Salish and Kootenai Tribes (CSKT) and the State of Montana.

Scope of Work

The Scope of Work is to secure fully engineered designs for hydraulic measurement structures at twelve distinct irrigation diversions on the FIIP, each of which is identified as a River Diversion Allowance (RDA's) location in the Compact. Ratable hydraulic structures (ex: flumes, weirs, or ratable gate structures) when properly installed and maintained are highly accurate, have a long service life, and reduce long-term field personnel costs. Accurate water measurement at FIIP irrigation diversion headworks is a necessary precursor to track RDA's and to improve the correspondence between headworks diversion amounts and crop water requirements at the farm unit level. Water measurement at FIIP irrigation headworks has recurrently been documented as a critical infrastructure need, and a requisite tool for overall project water management (most recently Modernization Plan (BIA, 2016), found at http://cskt- montana-citt.org/documents-and-reports/). With designs in hand, structure installations can be completed over a scheduled time frame.

Table 1.0 lists the twelve canal locations that will be included in the design work. Each location is identified as an RDA in the Compact, and each location is downstream of a primary headworks for a supply and distribution canal. Structures are planned at the listed locations due to the difficulty of maintaining ratings with open channel measurements. The Mission B Canal long crested flume is not included in the list, but is budgeted and planned for construction in Spring, 2018 under Task Order 2.0.

The CSKT will prepare a request for proposals (RFP), solicit bids using formal procurement procedures, and select a qualified contractor based on the objective set of criteria to be listed in the RFP. The solicitation will also be posted on the State's RFP website. At this time, the CSKT anticipates the RFP's Scope of Work will include:

A. A preliminary alternatives assessment at each location in which the contractor will outline options for each site. The set of options will be reviewed by the CSKT and CITT and a final design approach will be selected at each location and communicated to the contractor.
B. Final design materials for each location will be individually packaged, and based on the selected final design approach. Design materials will include:
   1. Site-summaries and all field collected information, including survey information and clearly located and durable control benchmarks at each project location;
   2. Identification and itemization of site constraints such as projected geotechnical/subsurface conditions, sediment management, backwater conditions, approach conditions, influence on other infrastructure, and constructability;
   3. Design considerations including alternatives assessment and rationale for selected structure design;
   4. All calculations, software output, and other work-products;
   5. One or more design sheets reviewed, approved and stamped by a licensed engineer. Design sheet(s) will include enough construction detail and project specifications so that all materials can be accurately estimated and they can be directly utilized either for construction by local work forces or as bid documents for a construction contractor; and
   6. An engineer's estimate of cost to construct each project.

Two of the proposed locations, the Lower S Canal at Jocko River and the Mission 6C Canal have recognized site constraints in the first 800 to 1,000 feet below the canal headworks at the stream/river intersection. Site constraints need to be considered as part of locating and designing a hydraulic structure and will be called out in the Request for Proposals.

The RFP will specify that hydraulic and construction design work follow industry standards for irrigation structures, as identified in standard manuals such as the USBR Design of Small Irrigation Structures, USBR Water Measurement Manual, and USBR WinFlume software application.

Table 1.0: RDA headworks included in Task Order 3.0 and the Scope of Work for structure design

Count	Location	Gaging status	Comments
1	Upper S Canal below Jocko River	active	difficult to rate, added to list based on Modernization Plan recommendation
2	Upper Jocko J Canal at Agency Creek	active	difficult to maintain accurate rating due to control shifts
3	Jocko N Canal at East Finley Creek	active	difficult to maintain accurate rating due to control shifts
4	Jocko E Canal at Agency Creek	active	difficult to maintain accurate rating due to vegetation
5	Jocko E Canal at Finley Creek	active	difficult to maintain accurate rating due to vegetation
6	Lower Jocko S Canal at Jocko River	not active	unable to maintain accurate rating
7	Lower Jocko J Canal at Jocko River	not active	unable to maintain accurate rating
8	Revais R Canal at Revais Creek	active	difficult to maintain accurate rating due to control shifts
9	Mission 6C Canal at Mission Creek	not active	unable to maintain accurate rating
10	Mission H Canal at Mission Creek	not active	unable to maintain accurate rating
11	Ronan B Canal at Mud Creek	active	difficult to maintain accurate rating due to control shifts
12	Hillside Ditch at headworks	active	difficult to maintain accurate rating due to vegetation

Project Flow and Budget

The State and CSKT have developed a process to advance a task order under the Measurement Workplan; this is summarized in the graphic below, with specific application to Task Order 3.0.

The exact timeframe to complete the Scope of Work is contingent on when a contract is let, but will not exceed one year in length.

The fund distribution for this Scope of Work shall match the budget submitted by the selected contractor, in an amount not-to-exceed $200,000.

Conclusion

Upon installation, these structures will provide long-service life and low maintenance ratable flow measurement at critical water management locations on the FIIP. Measurement and data management will be conducted and maintained by the CSKT Water Management Program. Existing stage data collection equipment will be utilized when available; new stage data collection equipment costs will be incorporated into construction costs at currently inactive locations. Information will be collected in real-time and will be published to the CSKT water information website: https://www.csktwaterdata.org.